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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,637	02/12/2004	Osamu Kato	049400-5027	1776
9629 7590 04/21/2008 MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004				
EXAMINER				
HALL, DEANNA K				
ART UNIT		PAPER NUMBER		
3767				
MAIL DATE		DELIVERY MODE		
04/21/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/776,637

**Applicant(s)**

KATO ET AL.

**Examiner**

DEANNA K. HALL

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 March 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10 and 11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 10 and 11 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 24 March 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date March 24, 2008  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Acknowledgments***

1. This office action is in response to the reply filed on March 24, 2008.
2. In the reply, the applicant cancelled claim 12. Claims 10 and 11 are pending in the application.
3. Objection to the drawings is withdrawn and the replacement drawing sheet (Figs. 1-4), submitted March 24, 2008, is acknowledged.
4. Cancellation of claim 12 has obviated the previous 112, 2<sup>nd</sup> paragraph rejection of claim 12.

### ***Information Disclosure Statement***

5. The information disclosure statement (IDS) submitted on March 24, 2008 is in compliance with the provisions of 37 CFR 1.97(b). Accordingly, the IDS is being considered by the Examiner.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**7. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleischhacker et al. (US 5,373,619) ("Fleischhacker") in view of Shiber (US 5,653,696).**

Claim 10 is being construed as a product-by-process claim. Product-by-process claims are not limited to the manipulations of the recited steps, only to the product implied by the steps. See MPEP 2113.

Fleischhacker discloses a wire-rope hollow tube 10 with one end being capable of being attached to a twisting device and a second end being capable of being secured to a weight, the wires are capable of having resisting electric current causing the wires to heat. Regarding claim 11, Fleischhacker further discloses the flexible hollow tube having a plurality of zones comprising a rigid-flexible gradient structure C17 L7-12. It is inherent that some sort of clamp must be used in Fleischhacker to obtain variations in torsional rigidity by changing the pitch or density of the helical winding of the wire.

Fleischhacker discloses the invention as substantially claimed; however, Fleischhacker does not directly disclose a knife-edge circle front welded to a leading end of the flexible hollow tube body as a blade edge which diametrically decreases progressively as approaching forward, and helical grooves provided inside the flexible tube body to carry away the hard clot powder. Shiber, in the analogous art, teaches a flexible tube with a knife-edge circle front 22, 102, Figs. 6, 24 and an outwardly arcuated blade edge which diametrically decreases progressively as approaching outward, Fig. 6. Shiber further teaches helical grooves inside the flexible tube body capable of removing the clot powder material, Fig. 24, C4 L44-46. Therefore, it would have been obvious to

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a person having ordinary skill in the art at the time the invention was made to have modified the device of Fleischhacker with the helical grooves and knife-edge circle front as taught by Shiber for breaking up and removing clot material.

### ***Response to Arguments***

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEANNA K. HALL whose telephone number is (571)272-2819. The examiner can normally be reached on M-F 9:00am-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Simons can be reached on 571-272-4965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deanna K. Hall/

Examiner, Art Unit 3767

/Kevin C. Simmons/

Supervisory Patent Examiner, Art Unit 3767